AUTHOR INDEX

Abe-Dohmae, S., 61
Abou-Donia, M. B., 247
Adams, M. E., 263
Al-Aqtum, M., 339, 409
Aniksztejn, L., 469
Aoshima, H., 299
Avrova, N. F., 365, 401
Azam, M., 487

Baquer, N. Z., 487
Bär, W., 93
Baumann, N., 353
Beitinger, H., 323
Bellato, P., 359
Beloeil, J.-C., 109
Ben-Ari, Y., 469
de Bengtsson, M. S. O., 521
Berndt, C., 385
Bertrand, P., 215
Besharse, J. C., 201
Beukers, M. W., 207
Blanchard, J.-C., 215
de Block, J., 69 , 577
Boadel-Biber, M. C.,
Boje, K. M., 473
Bouche, P., 353
Boudinot, E., 103
Bramham, C. R., 441
Brandel, J.-P., 215
Breer, H., 275
de Broca, A., 113
Brooks, J. C., 501, 511
Brooks, M. H., 501, 511
Brux, B., 385
Buser, M., 97
Butcher, S. P., 75
Butula, I., 289

Cameron, D., 75
Carmichael, S. W., 511
Cerveñansky, C., 237
Cha, S.-H., 201
Chader, G., 473
Chaki, S., 553
Chamoin, M. C., 529
Champagnat, J., 103, 109
Chavkin, C., 457
Chigorno, V., 315
Chigr, F., 113
Chung, Y.-S., 201
Coen, E. P., 69
Cohen, S., 219
Coquerel, A., 97
Corley, K. C., 81
Cortvrindt, R., 577
Cosovic, C., 391, 421, 433
Cragoe, Jr. E. J., 207
Cunningham, J. R., 43

Dajas, F., 237
De Potter, W. P., 69, 577
Denavit-Saubie, M., 103
Denoroy, L., 113
Dickinson, S. L., 307
Dicou, E., 129
Diksic, M., 537
Djamgoz, M. B. A., 139
Doble, A., 215
Drnovsek, V., 421
Duchemin, A. M., 281

Epelbaum, J., 113
Esders, S., 371

Facchinetti, E., 359
Fernandes, L. G., 289
Fletcher, R. T., 473
Flores, V., 257
Fortin, G., 109
Fournie-Zaluski, M. C., 103
Fuller, R. W., 37

Garritsen, A., 207
Girardi, E., 591
Gravielle, M. C., 257
Griffiths, R., 75
Gross, J., 385
Gudehithlu, K. P., 281
Gupta, G., 487

Hadjiconstantinou, M., 281
Hamano, S., 229
Hao-Phan, T., 81
Heldman, E., 219
Hemrick-Luecke, S. K., 37
Henkel, A., 55
Hernandez-R., J., 1
Houlgatte, R., 215
Huang, L.-Y. M., 463
Hutson, P. H., 43

Ijzerman, Ad P., 207
Inoue, Y., 299
Ito, J.-i., 493
Iuvone, P. M., 193

Jauberteau, M. O., 353
Javoy-Agid, F., 215
Jehle, A., 93
Jensen, B., 567
Jerusalinski, D., 237
de Jiménez Bonino, M. B., 521
Johnston, D., 461
Jordan, D., 113

Kalanj, S., 433
Kalia, M., 119
Karpova, O. B., 365
Kato, T., 493
Kendall, L., 75
Kim, Y.-B., 201
Kopp, N., 93, 113
Kracun, I., 391, 421, 433
Krempien, B., 391
Kubat, M., 421
Kumar, B. V. R., 559

Lacorazza, H. D., 521
Lapadula. D. M., 247
Lapadula, E. S., 247
Larsson, O. M., 567
Leavitt, B. R., 289
Léger, 353
de Lores Arnaiz, G. R., 591
Lun, A., 385

Matray, F., 97
Maysinger, D., 289
McDermott, A. M., 307
Mehraein, P., 93
Meininger, V., 353
Milan, F., 359
Miserez, B., 577
Mitsuka, S., 537
Mitsushio, H., 583
Morin-Surun, M. P., 103
Morita, K., 229
Morniroli, G., 93
Muramatsu, M., 553

Najimi, M., 113
Neal, M. J., 43
Neff, N. H., 281
Nishikawa, T., 583
Nowak, J. Z., 23

Oberfrank, F., 11
Oka, M., 229
Otomo, S., 553

Partoens, P., 69
Pasi, A., 93
Peña, C., 237
Pfaff, F., 97
Phillis, J. W., 19
Pittel, Z., 219
Pitto, M., 315
de Plazas, S. F., 257
Pocock, J. M., 263
Portalier, P., 529
Proust, B., 97

Raber, J., 473
Rahmann, H., 323, 339, 371, 409
Raskovsky, S., 237
Rebeiro-da-Silva, A., 289
Roger, O., 215
Roques, B. P., 103
Rösner, H.,339, 371, 391, 409, 421
Rostene, W., 113
Rubinstein, R., 219

Sarrieau, A., 113
Sastry, P. S., 559
Saxena, V. K., 69
Schifferer, F., 323
Schneider, P. G., 591
Schousboe, A., 567
Schweitzer, P., 109
Semark, J. E., 43
Simon, C., 529
Singh, V. B., 81

Skolnick, P., 473
Sok, D.-E., 201
Sonnentag, U., 371, 409
Sonnino, S., 315
Soudijn, W., 207
Suzuki, T., 61

Takada, A., 537
Takahashi, K., 583
Takashima, M., 583
Takita, M., 583
Talan-Hranilovic, J., 433
Tanaka, D., 299
Tanaka, R., 61,493
Tareilus, E., 275
Tayot, J., 97
Teraoka, K., 229
Ternaux, J. P., 529
Tettamanti, G., 315
Toffano, G., 359
Traub, M., 93
Trbojevic-Cepe, M., 421
Tyurin, V. A., 401
Tyurina, Y. Y., 401

Umino, A., 583
Ushiyama, Y., 553

Valsecchi, M., 315
Van Marck, E., 577
Vauquelin, G., 69
Venema, V. J., 263
Vizi, E. S., 11
Vukelic, Z., 391, 421
Vukicevic, S., 391

Wagner, H.-J., 139
Wagner, J. J., 457
Ward, J. S., 37
Westergaard, O. M., 567
Wilkin, G. P., 307
Wurster, A., 409

Yamamoto, Y. L., 537
Younes-Chennoufi, A. B., 353

Zawilska, J. B., 23
Zimmermann, H., 55
Zinserling, V. A., 365
Zorc, B., 289

SUBJECT INDEX

acetylcholine metabolism - in diencephalic conduction system, 583
acetylcholine synthesis - and choline efflux, 219
acetylcholine synthesis - in synaptosomes, 219
acetylcholine - decarboxylation, 201
acetylcholine - release from the retina, 43
adenosine A_1 receptors - interaction with amiloride, 207
ω-Agatoxins - effect on calcium channels in different preparations, 263
aging of human brain - effect of gangliosides, 421
aluminium - influence brain gangliosides, 391
Alzheimer's disease - distribution of gangliosides, 433
amiloride - effect on adenosine A_1 receptors, 207
antibodies - to antigangliosides, 353
antiganglioside antibodies - in motor-neuron disease, 353
antiganglioside antibodies - in peripheral neuropathies, 353
astrocyte membranes - interaction with sialosyl cholesterol, 493
astrocytes - binding of sialosyl cholesterol, 493
astrocytes - synthesis and release of GABA, 567
autoradiography - incorporation of valine into proteins, 537

benzodiazepine receptor sites - modulated by light, 257
benzodiazepine receptors - postnatal development, 257
brain stem - levels of β-endorphin and neurotensin, 97
α-bungarotoxin binding - role of histidine residues, 521
α-bungarotoxin binding - to nocotinic receptors, 521
butyrylcholine - decarboxylation, 201

caecum mucosa - release of substance P-immunoreactivity, 529
calcium channels - effect of ω-Agatoxins, 263
calcium - effect on binding of presynaptic membranes and vesicles, 55
calcium - ganglioside interactions, 323
calcium - in synaptic plasticity, 323
calcium - intrasynaptosomal levels, 275
calcium-dependent - release of acetylcholine and GABA, 43
cAMP - and dopamine functions in the retina, 168
catecholamine production - in adrenal chromaffin cells, 229
catecholamine production - related to tyrosine supply, 229
catecholamine secretion - in chromaffin cells, 501
Ca^{++}/calmodulin-dependent protein kinase II, 61
cerebral cortical neurones - synthesis and release of GABA, 567
cerebral spinal fluid - in Sudden Infant Death Syndrome, 97
3-chloro-α-phenylpyrazinemethanol - inhibits monoamine oxidase, 37
choline efflux - related to acetylcholine synthesis, 219
choline esters - and decarboxylation, 201
choline esters - on dimethylcarbamyl-acetylcholinesterase, 201
choline uptake - effect of monosialoganglioside GM1, 289
cholinergic neurones - in diencephalic system, 583
cholinergic neurotoxins - ethyl-choline and hemicholinium-3, 289
chromaffin cells - catecholamine formation, 229
chromaffin cells - catecholamine secretion, 501
chromaffin cells - effects of inorganic thiophosphate, 501
chromaffin cells - thiophosphorylated proteins, 511
chromaffin vesicle matrix, 511
Conus distans toxin - inhibits neurotransmitter release, 69
convulsant - action of 3-mercaptopropionic acid, 591
corticotropin releasing factor - increases tryptophan hydroxylase activity, 81
co-culture of neurones and astrocytes - GABA release and synthesis, 567
co-localisation - of dopamine and GABA, 147
co-release - of acetylcholine and GABA, 43
cytoskeletal proteins - effect of tri-o-cresyl phosphate on protein phosphorylation, 247
c-fos mRNA - effect of MPTP treatment, 281

decarboxylation - effect of choline esters, 201
decarboxylation - of acetylcholine and butyrylcholine, 201
Dendroaspis angusticeps venum - contains polypeptides that act on muscarinic receptor sites, 237
Dendroaspis angusticeps - characterisation of K^+ channel blockers, 553
development of human brain - influence of gangliosides, 421
development - of vagal motor neurones, 119
diabetes - insulin receptor kinase activity, 487
diencephalic conduction system - acetylcholine metabolism, 583
differentiation - and gangliosides, 339
24R,25-dihydroxyvitamine D_3 - prevents aluminium-induced alteration of brain gangliosides, 391
dimethylcarbamyl-acetylcholinesterase - influence of choline esters, 201
di-methyl proline releasing hormone - stimulates phosphoinositide turnover, 307
dopamine functions - in the retina, 179
dopamine functions - related to cAMP, 168
dopamine neurones - in different retinas, 141
dopamine receptors - in human foetal brain, 559
dopamine receptors - ontogeny, 559
dopamine release, 147
dopamine transport - effect by hypoxia, 385
dopamine transport - effect of gangliosides, 385
dopamine - co-localises with GABA, 147
dopamine - different methods for localisation, 140
dopamine - in the retina, 139
dopamine - modulator in the retina, 193

β-endorphin - in cerebral spinal fluid, 97
β-endorphin - level in infant human brain, 93
enterochromaffin cells - release of substance P-immunoreactivity, 529
enzyme immunoassay - of nerve growth factor, 215
Escherichia coli - used to produce nerve growth factor, 129
ethyl-choline - cholinergic neurotoxin, 289

fatty acids - effect on Na^+/K^+-ATPase, 12

GABA - colocalises with dopamine, 147
GABA - release from retina, 43
GABA - synthesis and release, 567
GABAergic mechanisms - of neurones co-cultured with astrocytes, 567
ganglioside GM1 inner ester - GM1 lactone, 359
ganglioside - calcium interactions, 323
ganglioside - dependent factor, 401
ganglioside -of brain and vascular plexus, 365
gangliosides - and hypoxia, 385
gangliosides - distribution in Alzheimer's disease, 433
gangliosides - effect of aluminium, 391
gangliosides - effect on neuronal survival, shape and growth, 409
gangliosides - in development and aging, 421
gangliosides - in human brain, 421
gangliosides - in meningoencephalitis, 365
gangliosides - in neuronal differentiation, 339
gangliosides - in synaptic plasticity, 323
gangliosides - influence on action of sialosyl cholesterol, 493
gangliosides - influence on dopamine uptake, 385
gangliosides - involvement in regeneration of optic nerve, 371
gangliosides - protein interactions in granule cells, 315
glycine receptors - in retina, 473
glycine receptors - modulation in NMDA toxicity, 473
glycine receptors - strychnine-insensitive, 473
GM1 ganglioside - containing photoactivable azide, 315
GM1 lactone - prodrug of GM1, 359
granule cells - proteins interact with gangliosides, 315

hemicholinium-3 - cholinergic neurotoxin, 289
hippocampus - synaptic plasticity, 441
histidine residues - in α-bungarotoxin binding site, 521
homocysteate - effects on amino acids, 75
homocysteine - effects on amino acids in hippocampus, 75
hypoxia - beneficial effect of gangliosides, 385
hypoxia - effect on dopamine uptake, 385

insulin receptor kinase activity - in diabetes, 487
insulin receptors - in rat brain, 487
insulin - stimulation of kinase activity, 487

lipid peroxidation - in synaptosomes, 401
lipid peroxidation - reduced by ganglioside-dependent factor, 401
long-term potentaition - involvement of opioids, 441
long-term potentiation - and endogenous opioids, 457
long-term potentiation - and opioid peptides, 469
long-term potentiation - independence of NMDA receptors, 461

maturation of newborn rat brain - implications for Sudden Infant Death Syndrome, 109
medulla oblongata of Sudden Infant Death children - binding of neurotensin and somatostatin, 113
melatonin - biosynthesis in the retina, 23
melatonin - formation in photoreceptors, 25
melatonin - in the retina, 179
melatonin - regulation in the retina, 23
memory - involvement of opioid peptides, 449
meningoencephalitis - gangliosides in brain and vascular plexus, 365
3-mercaptopropionic acid - a convulsant, 591
3-mercaptopropionic acid - increases binding of quinuclidinyl benzilate binding, 591
microdialysis - of amono acids, 75
modulation - of acetylcholine metabolism, 583
modulation - of benzodiazepine receptors by light, 257
modulator - of dopamine in the retina, 193
monoamine oxidase - inhibited by 3-chloro-α-phenylpyrazinemethanol, 37
monosialoganglioside GM1 - effect on choline uptake, 289
motor-neuron disease - presence of antiganglioside, 353
MPTP - induction of c-fos mRNA, 281
MPTP = 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine, 281
mRNA of N-methyl-D-aspartate receptors - injected into Xenopus oocytes, 299
mucosa - release of substance P-immunoreactivity, 529
muscarinic receptor ligands - inhibition by polypeptides from snake, 237

Na^+/K^+-APTase - effect of stimulatory ligands, 13
Na^+/K^+-ATPase, 1
Na^+/K^+-ATPase - and synaptic transmission, 19
Na^+/K^+-ATPase - effect of ouabain-like compounds, 11
Na^+/K^+-ATPase - regulation by neurotransmitters, 1
nerve growth factor - analysis by enzyme immunoassay, 215
nerve growth factor - expression in Escherichia coli, 129
neuronal calcium channels - blocked by ω-Agatoxin, 263
neuronal growth - effect of gangliosides, 409
neuronal shape - effect of gangliosides, 409
neuronal survival - effect of gangliosides, 409
neurotensin - binding to medulla oblongata, 113
neurotensin - in brain stem, 97
neurotensin - in cerebral spinal fluid, 97
neurotransmitter release - inhibition of toxin from Conus distans, 69
neurotransmitters - influence of Na^+/K^+-ATPase, 1
nicotinic acetylcholine receptors, 521
noradrenaline-organelles - from sympathetic ganglia, 577
N-methyl-D-aspartate receptors - expressed in Xenopus oocyte, 299

NMDA neurotoxicity - in retina, 473
NMDA neurotoxicity - involvement of glycine, 473
NMDA receptors - and opioids, 447
NMDA receptors - independence in long-term potentiation, 461

ontogeny - of dopamine receptors in human brain, 559
ontogeny - of vagus nerve, 119
opioid action - role of second messengers, 465
opioid pathways - involvement of NMDA receptors, 447
opioid peptides - and long-term potentiation, 441, 457, 469
opioid peptides - control of breathing, 103
opioid peptides - seizures and memory, 449
opioid receptor - peptidergic regulation, 441
opioid transmission - dysregulation in Sudden Infant Death Syndrome,103
opioids - exctatory effects, 463
opioids - in hippocampus, 441
optic nerve - regeneration, 371
ouabain - effect on Na^+/K^+-ATPase, 11

P_{400} protein - phosphorylation in synaptic cytoskeleton, 61
P_{400} protein - substrate for Ca^{++}/calmodulin-dependent protein kinase, 61
peripheral neuropathies - antiganglioside antibodies, 353
phorbol esters - binding of presynaptic membranes and vesicles, 55
phosphoinositide turnover - in astrocytes, 307
phosphoinositide turnover - stimulated by thyrotropin releasing hormone, 307
phosphorylation of cytoskeletal proteins - in sciatic nerve, 247
phosphorylation - increases with tri-o-cresyl phosphate treatment, 247
photoreceptor - site for melatonin formation, 25
photoreceptors - retinomotor movements, 156
postsynaptic density-enriched fractions - from different brain regions, 61
potassium channel blockers - purification, 553
potassium channel blocking peptides, 553
presynaptic membranes - binding to synaptic vesicles, 55

quantitative autoradiography, 537
quinuclidinyl benzilate binding - increased by 3-mercaptopropionic acid, 591
quinuclidinyl benzilate binding - to cholinergic receptor, 591

receptor - nicotinic type, 521
recombinant human nerve growth factor, 129
regeneration of optic nerve - involvement of gangliosides, 371
release - of dopamine, 147
retina - dopaminergic system, 139
retina - glycine receptors, 473
retina - melatonin cycle, 179
retina - NMDA-induced neurotoxicity, 473
retina - release of acetylcholine and GABA, 43
RU 38486 - blocks effect of corticotropin releasing factor, 81

sodium/potassium ATPase, see Na^+/K^+-ATPase synaptosomes - lipid peroxidation, 401
second-messengers - role of opioid action, 465
seizures - involvement of opioid peptides, 449
serotonin - inhibits substance P-immunoreactivity release, 529
sialosyl cholesterol - binding to astrocyte membranes, 493
sialosyl cholesterol - interaction with gangliosides, 493
sialosyl cholesterol - interactions with plasma membrane astrocytes, 493
snake venum polypeptides - act on muscarinic cholinergic sites, 237
snake venum - purification of K^+ channel blockers, 553
somatostatin - binding sites to medulla oblongata, 113
spider venum toxins - ω-Agatoxins block neuronal calcium channels, 263
spiperone - binding in human brain, 559
striatum - spiperone binding in human brain, 559
strychnine-insensitive - glycine receptors, 473
substance P-immunoreactivity - release from enterochromaffin cells, 529

substance P-immunoreactivity- release inhibited by serotonin and calcium free medium, 529
Sudden Infant Death Syndrome - dysregulation of opioid transmission in breathing, 103
Sudden Infant Death Syndrome - levels of neurotensin and β- endorphin cerebral spinal fluid and brain stem, 97
Sudden Infant Death Syndrome - maturation of the brain, 109
Sudden Infant Death Syndrome -β-endorphin in brain, 93
sympathetic ganglia - preparation of noradrenaline-storing organelles, 577
synaptic connectivity in the retina, 153
synaptic cytoskeleton - phosphorylation of P_{400} protein, 61
synaptic plasticity - in hippocampus, 441
synaptic plasticity - role of gangliosides and calcium, 323
synaptic vesicles - binding to presynaptic vesicles, 55
synaptosomal levels - of calcium, 275
synaptosomes - acetylcholine synthesis, 219
synaptosomes - effect of ω-Agatoxins on calcium channels, 263

thiophosphorylated proteins - in chromaffin cells, 511
thyrotropin releasing hormone - stimulates phosphoinositide turnover, 307
toxin - from snail inhibits neurotransmitter release, 69
tri-o-cresyl phosphate - increases phosphorylation of cytoskeletal proteins,247
tryptophan hydoxylase - activity increased by corticotropin releasing factor 81
tryptophan hydroxylase activity - in amygdala, 81
tumor proteins - incorporation of valine, 537
tyrosine - supply related to catecholamine production, 229

vagal motor neurones - development, 119
vagus nerve - ontogeny, 119
valine - incorporation into tumor proteins, 537
vanadium - effect on Na^+/K^+-ATPase, 12
vesicles - noradrenaline-containing, 577
vesicles - of chromaffin cells, 511
Xenopus oocyte - expression of N-methyl-D-aspartate receptors, 289